Montana Department of Natural Resources and Conservation
Water Resources Division
Water Rights Bureau

ENVIRONMENTAL ASSESSMENT
For Routine Actions with Limited Environmental Impact

Part I. Proposed Action Description

1. Applicant/Contact name and address:

   Applicant:
   MT Moonlight Basin Water & Sewer
   PO Box 160040
   Big Sky, MT 59716-0040

   Consultant:
   Morrison Maierle Inc
   2880 Technology Blvd W
   PO Box 1113
   Bozeman, MT 59771

2. Type of action: Combined Application for Beneficial Water Use Permit 41F 30070321 and Change 41F 30070322. The Applicant proposes to use groundwater from six wells for municipal supply and proposes to change the purpose of four water rights; 41F 14211-00, 41F 15336-00, 41F 15345-00, and 41F 15348-00; to mitigation.

3. Water source name:

   Permit 41F 30070321: Groundwater
   Change 41F 30070322: Jack Creek

4. Location affected by project:

   Permit 41F 30070321: Sections 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 26; T6 S, R2 E, Madison County
   Change 41F 30070322: Sections 19, 20, 28, 29, 33; T5 S, R1 E, Madison County

   See Figures 1 and 2 on the next page for overview maps.

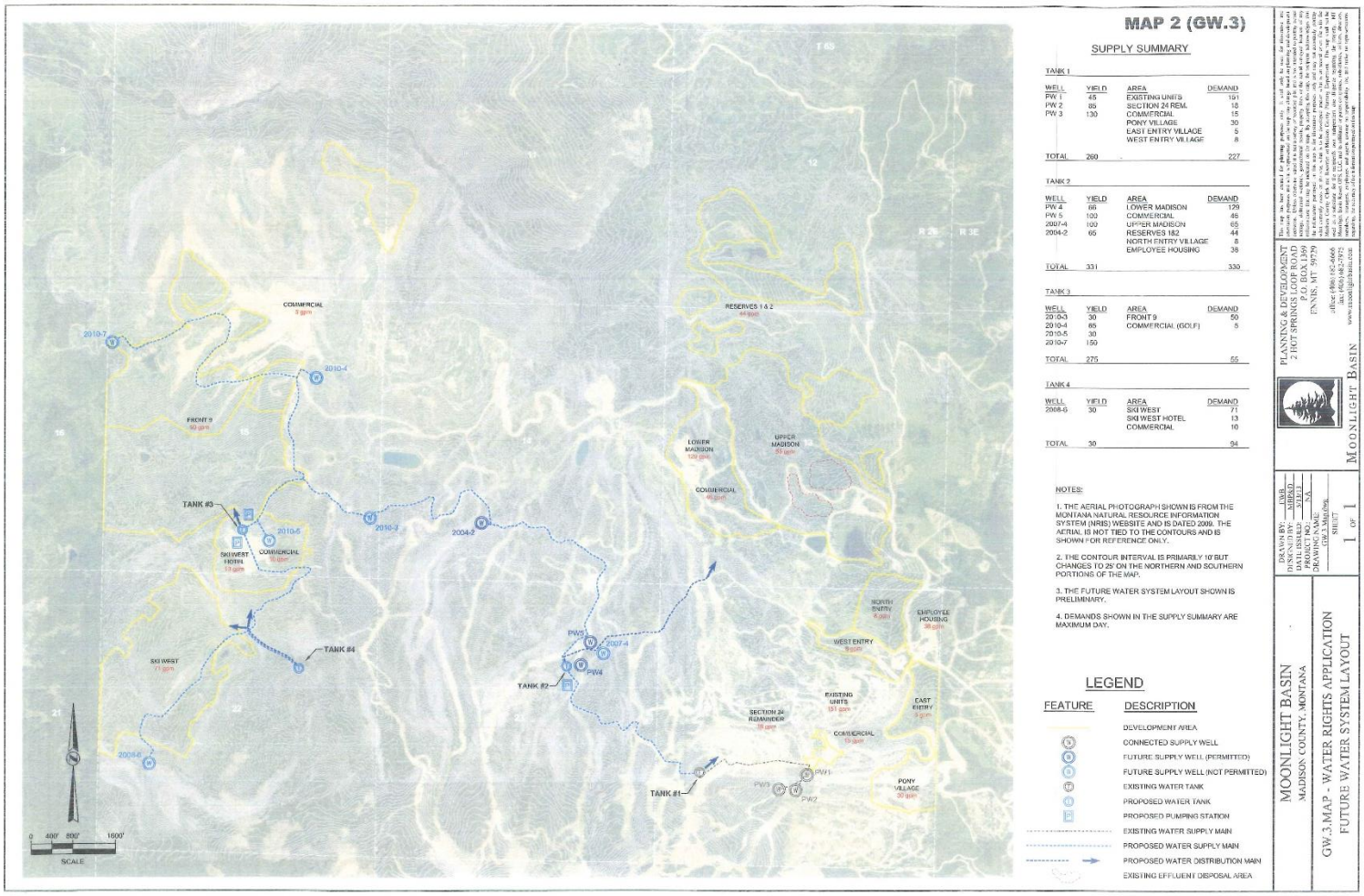

Figure 1: Overview map of the Moonlight water supply system, from the Application materials.

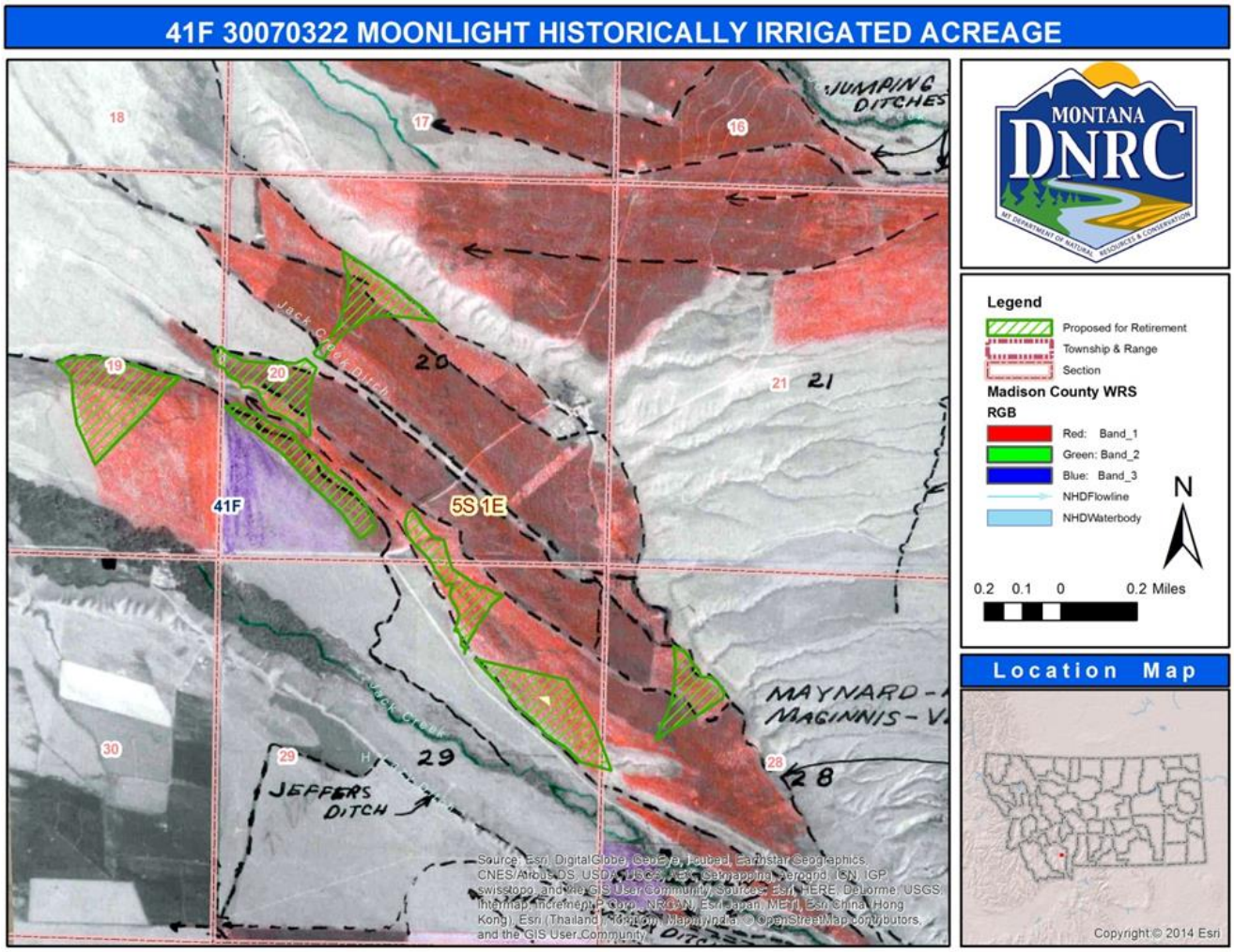

Figure 2: Overview map of the acreage to be retired, from the Technical Report.

5. Narrative summary of the proposed project, purpose, action to be taken, and benefits:

The Applicant proposes to supply the Moonlight Resort development with groundwater from six wells located Sections 15, 22, and 22 of T6 S, R2 E, Madison County. They propose to divert 405 gallons per minute (GPM) up to 274.9 acre-feet (AF) of water per annum. The proposal includes 233.8 AF of diverted volume for indoor domestic and commercial use, and 41.1 AF of diverted volume for 29.78 acres of lawn and garden irrigation. The place of use is within Sections 1, 2, 3, 9, 10, 11, 12, 13, 14, 15, 16, 22, 23, 24, 26; T6 S, R2 E, Madison County.

The Applicant proposes to change the purpose of Statements of Claim 41F 14211-00, 41F 15336-00, 41F 15345-00, and 41F 15348-00 from irrigation to mitigation. A total of 133.2 acres that were historically irrigated will be fully retired from irrigation in order to provide a mitigation volume of 155.77 AF. The place of use that is being retired from these water rights is located in Sections 19, 20, 28, and 29, T6 S, R2 E, Madison County. Water will be left instream in Jack Creek at a headgate located in the NWNESW of Section 34, T5 S, R1 E, Madison County. A constant flow rate of 0.43 CFS from May 1 – October 31 will be left instream.

The Department shall issue a permit if the Applicant proves the criteria in §85-2-311, MCA, are met. The Department shall issue a change authorization if the Applicant proves the criteria in §85-2-402, MCA, are met.

6. Agencies consulted during preparation of the Environmental Assessment:
    - Montana Department of Fish, Wildlife & Parks (FWP) – FishMT
        - http://fwp.mt.gov/fish/
    - Montana Department of Environmental Quality (DEQ) – Clean Water Act Information Center (CWAIC)
        - http://deq.mt.gov/wqinfo/CWAIC/default.mcpx
    - Montana National Heritage Program (MTNHP) – Species of Concern:
        - http://mtnhp.org/SpeciesOfConcern
    - U.S. Fish & Wildlife Service (USFWS) – National Wetlands Inventory Wetlands Mapper
        - http://www.fws.gov/wetlands/Data/Mapper.html
    - Natural Resource Conservation Service (NRCS) – Web Soil Survey (WSS)
        - http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm

Part II. Environmental Review

1. Environmental Impact Checklist:

PHYSICAL ENVIRONMENT

WATER QUANTITY, QUALITY AND DISTRIBUTION

Water quantity *- Assess whether the source of supply is identified as a chronically or periodically dewatered stream by FWP. Assess whether the proposed use will worsen the already dewatered condition.*

Determination: No significant impact identified.

Groundwater is not listed as chronically or periodically dewatered by FWP.

Depletions from groundwater pumping will accrue to Lone Creek and Jack Creek, tributaries to the Madison River. As determined by a search of FishMT conducted on March 9, 2021, Lone Creek is not listed as chronically or periodically dewatered by FWP. The lower reach of Jack Creek is identified as chronically or periodically dewatered. The proposed mitigation change will leave additional water instream during the April – October irrigation season when extractive demands on Jack Creek are greatest. The proposed change will not significantly impact water quantity in Lone or Jack Creeks.

Water quality *- Assess whether the stream is listed as water quality impaired or threatened by DEQ, and whether the proposed project will affect water quality.*

Determination: No significant impact identified.

According to a search of the DEQ CWAIC website conducted on March 9, 2021, Lone Creek has not been assessed for water quality.

According to a search of the DEQ CWAIC website conducted on March 9, 2021, Jack Creek is listed as fully supporting primary contact recreation. It has not been assessed for agricultural or drinking water uses. It is listed as not fully supporting aquatic life due to flow regime modification from irrigated crop production and alteration in stream-side or littoral vegetative covers from grazing in riparian areas and modification/destabilization of streambanks. This project will not have a significant impact on the water quality because water that was historically diverted and consumed will now be left instream during the summer irrigation months.

Groundwater **-** *Assess if the proposed project impacts ground water quality or supply. If this is a groundwater appropriation, assess if it could impact adjacent surface water flows.*

Determination: No significant impact identified.

The Department's hydrogeological modeling found that groundwater was physically and legally available in the amounts requested, so the proposed appropriation of groundwater should not significantly impact groundwater supply.

Groundwater or adjacent surface water quality is not likely to be affected by the project, as a licensed driller has constructed the six wells in accordance with the rules of the Board of Water Well Contractors. Construction was overseen by licensed professional engineers and groundwater hydrologists.

The project should not significantly affect surface water flows because the Applicant's mitigation plan will leave water instream in Jack Creek during months in which it would have historically been diverted and consumed.

DIVERSION WORKS - *Assess whether the means of diversion, construction and operation of the appropriation works of the proposed project will impact any of the following: channel impacts, flow modifications, barriers, riparian areas, dams, well construction.*

Determination: No significant impact identified.

Groundwater will be diverted from the six wells with pumps, and all use will be measured. A licensed driller has constructed the wells in accordance with the rules of the Board of Water Well Contractors. The diversion works should not create significant channel impacts, flow modifications, or barriers.

For the Jack Creek water rights changed to mitigation, water will be left instream, so the proposed project will not create significant channel impacts, flow modifications, or barriers.

UNIQUE, ENDANGERED, FRAGILE OR LIMITED ENVIRONMENTAL RESOURCES

Endangered and threatened species *- Assess whether the proposed project will impact any threatened or endangered fish, wildlife, plants or aquatic species or any "species of special concern," or create a barrier to the migration or movement of fish or wildlife. For groundwater, assess whether the proposed project, including impacts on adjacent surface flows, would impact any threatened or endangered species or "species of special concern."*

Determination: No significant impact identified.

The Montana National Heritage Program's website was queried on March 9, 2021, for T6 S, R1 E; and T5 S, R1 E. Results are summarized below.

- Animal Species of Concern: Townsend's Big-eared Bat, Wolverine, Grizzly Bear, Great Blue Heron, Clark's Nutcracker, Trumpeter Swan, Westslope Cutthroat Trout, Arctic Grayling. Eight (8) total species.
- Animal Potential Species of Concern: None.
- Animal Special Status Species: Bald Eagle. One (1) total species.

The MTNHP website identified the following plant species

- Plant Species of Concern: Spiny Skeletonweed, Whitebark Pine. Two (2) total species.
- Plant Potential Species of Concern: None.
- Plant Special Status Species: None.

The proposed project is to supply Moonlight Resort with groundwater and to mitigate adverse effects to nearby surface water sources. The project area is private land that is proposed to be developed. The effects of diverting groundwater and changing the purpose of the surface water right on any threatened or endangered species will not be significant.

Wetlands *- Consult and assess whether the apparent wetland is a functional wetland (according to COE definitions), and whether the wetland resource would be impacted.*

Determination: No impact identified.

A March 9, 2021, search of the USFWS Wetlands Mapper did not identify any wetlands within the water supply system area for Moonlight's development or within the historical place of use of the Jack Creek water rights to be partially retired.

Ponds *- For ponds, consult and assess whether existing wildlife, waterfowl, or fisheries resources would be impacted.*

Determination: Not applicable.

No ponds are involved in this project.

GEOLOGY/SOIL QUALITY, STABILITY AND MOISTURE - *Assess whether there will be degradation of soil quality, alteration of soil stability, or moisture content. Assess whether the soils are heavy in salts that could cause saline seep.*

Determination: No significant impact identified.

Diverting groundwater and changing the purpose of the surface water rights to mitigation should not significantly affect soil characteristics. The Moonlight project area is proposed for development. The acreage proposed for retirement on the Jumping Horse Ranch will no longer be irrigated, but the surrounding acreage will continue to be irrigated. A March 9, 2021, search of the NRCS WSS site did not identify any saline seeps in the area.

VEGETATION COVER, QUANTITY AND QUALITY/NOXIOUS WEEDS - *Assess impacts to existing vegetative cover. Assess whether the proposed project would result in the establishment or spread of noxious weeds.*

Determination: No significant impact identified.

Diverting groundwater and changing the purpose of the surface water rights to mitigation should not significantly affect vegetation cover. The Moonlight project area is proposed for development. The retired acreage on Jumping Horse Ranch will no longer be irrigated, but the adjacent lands will continue to be irrigated as they have historically. In general in Montana, control of noxious weeds is the responsibility of the property owner.

AIR QUALITY - *Assess whether there will be a deterioration of air quality or adverse effects on vegetation due to increased air pollutants.*

Determination: No impact identified.

This project will not impact air quality.

HISTORICAL AND ARCHEOLOGICAL SITES - *Assess whether there will be degradation of unique archeological or historical sites in the vicinity of the proposed project if it is on State or Federal Lands. If it is not on State or Federal Lands simply state NA-project not located on State or Federal Lands.*

Determination: Not applicable.

The project is not located on State or Federal Lands. Furthermore, the Applicant made no mention of significant historical or archeological sites on the property.

DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AND ENERGY - *Assess any other impacts on environmental resources of land, water and energy not already addressed.*

Determination: No impact identified.

No other demands on environmental resources of land, water, and energy have been identified.

HUMAN ENVIRONMENT

LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS - *Assess whether the proposed project is inconsistent with any locally adopted environmental plans and goals.*

Determination: No significant impact identified.

The Applicant's goals are to supply their development with groundwater and to mitigate potentially affected surface water sources. The Big Sky-Moonlight area is a fast-growing location within Montana, with high demand for new domestic and commercial development. The project area is located within a basin closed to new appropriations of water, so new uses of water will need to offset depletions to surface water. This proposal is consistent with the goal of protecting current water users from adverse effects due to development and new water uses.

ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES - *Assess whether the proposed project will impact access to or the quality of recreational and wilderness activities.*

Determination: No impact identified.

This project is located on private property and will not affect access to recreational activities or the quality of recreational and wilderness activities.

HUMAN HEALTH - *Assess whether the proposed project impacts on human health.*

Determination: No significant impact identified.

The proposed groundwater appropriation will be a public water supply system, regulated by the Montana Department of Environmental Quality. The design and construction of the system will be overseen by licensed professional engineers.

PRIVATE PROPERTY - *Assess whether there are any government regulatory impacts on private property rights.*
Yes___ No _X_ If yes, analyze any alternatives considered that could reduce, minimize, or eliminate the regulation of private property rights.

Determination: No impact identified.

The project does not impact government regulations on private property rights.

OTHER HUMAN ENVIRONMENTAL ISSUES - *For routine actions of limited environmental impact, the following may be addressed in a checklist fashion.*

Impacts on:

(a) *Cultural uniqueness and diversity?* No impacts identified.

(b) *Local and state tax base and tax revenues?* No significant impacts identified. Currently vacant land is proposed for development, which would likely increase property tax revenue.

(c) *Existing land uses?* No significant impacts identified. Historically irrigated acreage is proposed for retirement. Currently vacant land is proposed for development.

(d) *Quantity and distribution of employment?* No impacts identified. Design and construction of the project may create additional jobs.

(e) *Distribution and density of population and housing?* No significant impacts identified. Domestic and commercial developments are proposed for construction.

(f) *Demands for government services?* No significant impacts identified.

(g) *Industrial and commercial activity?* No impacts identified.

(h) *Utilities?* No impacts identified.

(i) *Transportation?* No impacts identified.

(j) *Safety?* No impacts identified.

(k) *Other appropriate social and economic circumstances?* No impacts identified.

2. *Secondary and cumulative impacts on the physical environment and human population:*

Secondary Impacts: No secondary impacts have been identified.

Cumulative Impacts: No cumulative impacts have been identified.

3. *Describe any mitigation/stipulation measures:* None.

4. *Description and analysis of reasonable alternatives to the proposed action, including the no action alternative, if an alternative is reasonably available and prudent to consider:* No reasonable alternatives have been identified. Jack Creek and Madison River watershed basins are closed to new appropriations of water. Under Montana law, the only way to allow new consumptive uses is through mitigating the consumed volume.

PART III. Conclusion

1. ***Preferred Alternative:*** The preferred alternative is to grant the permit and change applications if the Applicant can prove that the criteria in §85-2-311 and §85-2-402, MCA, are met.

2 ***Comments and Responses***: None.

3. ***Finding:***
Yes___ No_X_ Based on the significance criteria evaluated in this EA, is an EIS required?

If an EIS is not required, explain why the EA is the appropriate level of analysis for this proposed action: The EA is the appropriate level of analysis because the proposed project is to supply domestic and commercial development with groundwater and to change an existing water right to a mitigation purpose in order to offset surface water depletions. None of the identified impacts for any of the alternatives is significant as defined in ARM 36.2.524. No significant adverse effects are anticipated.

Name of person(s) responsible for preparation of EA:

Name: Brent Zundel
Title: Civil Engineering Specialist
Date: March 9, 2021